claims 5, 8, 10, 18 and 31-35 are objected to. By this amendment, claims 1-37 continue unamended.

In view of the following discussion, the applicants submit that all of the claims now pending in the application are in allowable form and that such allowance is earnestly solicited.

REJECTION OF CLAIMS 1-4, 6, 7, 9, 12-17, 19-30 AND 36-37 UNDER 35 U.S.C. §102(e)

Claims 1-4, 6, 7, 9, 12-17, 19-30 and 36-37 stand rejected (per comment 2 of the Office Action) under 35 U.S.C. §102(e) as being anticipated by the Shiga patent (U.S. Patent Application No. 6,005,562 issued 12/21/99). The applicants respectfully traverse.

The Shiga arrangement provides for the transmission to users of an electronic program guide (EPG) comprising image and text data. The EPG image data may comprise full or reduced-size image frames of broadcast channels which may then be identified using EPG text data. The Shiga arrangement superimposes baseband EPG text data onto a single frame for each channel. The superimposed EPG text and image data is then encoded using an MPEG encoder. Thus, full frame image data, of either reduced size or standard size, is superimposed with EPG data prior to video encoding. It is important to note that the Shiga reference does not utilize any of the slice-based or slice-layer processing techniques of the claimed invention. Moreover, the Shiga arrangement is incapable of performing the slide-based processing of the present invention.

The Shiga patent fails to disclose or suggest at least the invention of claim 1, which recites:

> " A method for encoding a program guide having included therein a guide portion and a video portion, the method comprising:
> encoding a first set of slices for the guide portion for each of a plurality of guide pages; and
> encoding a second set of slices for the video portion for each of a plurality of video streams."

In contrast to the above-quoted claim language, the Shiga patent has absolutely nothing to do with slice-based encoding. Rather, the Shiga arrangement uses a standard MPEG encoder to encode entire image frames provided by a video signal formed by compositing EPG image data and EPG text data. This is entirely unlike the claimed invention. The Shiga arrangement provides no teaching, no suggestion and no ability to perform the slice-based encoding steps of claim 1.

The Examiner contends that "slices are met by portions of background video or EPG," citing FIG. 8, FIG. 9, and column 4, lines 47-67 of Shiga. It is respectfully submitted that the Examiner has misconstrued the teachings of the cited reference. Specifically, the portions of background video or EPG noted by the Examiner are simply not encoded by the Shiga arrangement using a slice-based technique. There is nothing within the Shiga reference to disclose or suggest the use of slice layer processing. It is also important to the proper understanding of the present invention to note that the notions of background layer and foreground layer as generally used within the image processing arts do not equate to slice layer processing. The fact that the Shiga arrangement utilizes compositing techniques to effect any foreground/background layer imagery has nothing to do with the slice-layer processing of the present invention.

It is important to note that the term "slice" within the context of an embodiment of the present invention has a specific meaning. Referring to the bottom paragraph of page 6 of the disclosure, it is stated that:

> "To enhance error recovery, the MPEG-2 standard contemplates the use of a 'slice layer' where a video frame is divided into one or more slices. A slice contains one or more contiguous sequence of macroblocks. The sequence begins and ends at any macroblock boundary within the frame."

The Shiga arrangement utilizes standard, frame-based encoding techniques while the subject invention utilizes slice-layer encoding techniques. The cited portion of Shiga quoted in its entirety is as follows:

> "Switcher 301 is coupled to a program control device 308 which controls the switcher to divide the program data supplied thereto via respective broadcast channels into groups of broadcast channels. Each such broadcast channel carries the aforementioned program data which currently is being transmitted. Assuming that the program data transmitted on a respective broadcast channel contains video and audio data, each group of five broadcast channels is coupled to a respective

> MPEG encoder 303-1, 303-2 ... 303-7 wherein the video and audio data are compressed in accordance with the known MPEG standard. Program control device 308 also controls switcher 301 to couple two broadcast channels to a promotion channel generator 302 which is described in greater detail in connection with FIG. 2. Suffice it to say that the promotion channel generator operates to produce promotion program data which, as will be described, differs from the broadcast channel program data primarily in that the promotion channel program data consists of single frame video data used to promote particular broadcast channels ...."

The above-quoted portion of Shiga clearly contemplates the encoding of entire frames of video data, rather than the slice-based encoding of the present invention. Specifically, the cited reference only operates upon the picture layer, rather than the slice layer within, for example, the MPEG-2 encoding standard. In fact, as noted in the portion of Shiga cited by the Examiner, "each such broadcast channel carries the aforementioned program data which currently is being transmitted." (column 4, lines 51-53). The Shiga reference operates to superimpose EPG-related imagery over promotional imagery. The promotional imagery is generated using an entire image frame, rather than slices of an image frame. In fact, referring to FIG. 2 of Shiga, it can be seen that the promotion channel generating device 200 receives full frame broadcast channel imagery from the switcher 301, whereupon a single-frame generating device 332 produces single-frame data which is coupled to superimposer 333 along with the EPG data. The net result is that full frame baseband video data is superimposed with EPG data to produce a resulting superimposed video stream which is subsequently encoded by an MPEG encoder. This is entirely different than the subject invention.

The Shiga reference lacks the teaching, suggestion and ability to function at the slice-level as contemplated by the claimed invention. Thus, the Shiga patent cannot possibly disclose or suggest the claimed invention.

Since the Shiga patent does not disclose or suggest the claimed invention, it is respectfully submitted that the invention of claim 1 is patentable over Shiga. Moreover, since independent claims 12, 23 and 36 include relevant limitations similar to those discussed above with respect to claim 1, it is respectfully submitted that these claims are also patentable for at least the reasons discussed above with respect to claim 1. Finally, since dependent claims 2-11, 13-22, 24-35 and 37 depend, either directly or

indirectly, from claims 1, 12, 23 and 36, and recite additional limitations therefrom, it is respectfully submitted that these dependent claims are also patentable for at least the reasons discussed above with respect to claim 1.

ALLOWABLE SUBJECT MATTER

The applicants thank the Examiner for noting that claims 5, 8, 10, 11, 18 and 31-35 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. While the applicants agree that such claims would indeed be allowable, it is respectfully submitted that the above amendments made to the respective base and/or intervening claims render such base and/or intervening claims patentable and, therefore, those claims dependent therefrom are also patentable. Thus, the applicants submit that the objected to claims of 5, 8, 10, 11, 18 and 31-35 are themselves patentable.

CONCLUSION

Thus, the applicants submit that all of the claims presently in the application are patentable and that allowance of these claims is earnestly solicited. If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Eamon J. Wall, Esq. at 732-530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Date: 8/20/01

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